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ABSTRACT

The status of Tennessee public education from preschool through graduate school is summarized in this joint report. Following an introduction, the report describes the state's readiness for learning and working, changes necessary for the 1990s, goals and plans for the future, expected results, and leadership challenges. Appendices contain requirements for the annual joint report, state high school graduation requirements, course requirements for university admission, national goals, the state master plan and objectives, state higher education master plan and objectives, and state planning documents. Three tables are included. (LMI)

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CHALLENGES FOR TENNESSEE PUBLIC EDUCATION: WORKING TOGETHER TOWARD THE TWENTY-FIRST CENTURY

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CHALLENGES FOR TENNESSEE PUBLIC EDUCATION: WORKING TOGETHER TOWARD THE TWENTY-FIRST CENTURY

Annual Joint Report
on
Preschool Through Graduate Education in Tennessee

The Tennessee State Board of Education
and
The Tennessee Higher Education Commission

January 25, 1991

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PREFACE

The State Board of Education and the Tennessee Higher Education Commission annually provide a joint report to the Governor, the General Assembly, and all public schools and institutions of higher learning and their respective boards. The preparation of the annual joint report provides an opportunity for the Board and the Commission to assess joint efforts and to present a statement on plans and goals for the future.

The 1991 annual joint report, Challenges for Tennessee Public Education: Working Together Toward the Twenty-first Century, summarizes the status of Tennessee public education, preschool through graduate school. The report describes the state's readiness for learning and working, changes necessary during the 1990s, goals and plans for the future, and the results we expect by the year 2000.

During the next decade, Tennessee must make available an educational system which will support a changing economy, improve the quality of life, and meet the aspirations of its citizens. The Board and the Commission affirm their resolve to provide the necessary policy leadership to attain the goals contained in the respective Master Plans for public schools and higher education institutions to meet these challenges.

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INTRODUCTION

The world is at a critical moment in history. During the past year, a series of global events of historic proportion have taken place. The Cold War ended and the Berlin Wall came down. Perastroika and glasnost became realities as the nations of Central and Eastern Europe struggled toward independence and freedom. A major crisis in the Persian Gulf has threatened world peace. These international events underscore the growing realization by Tennesseans that the cultural, economic, and political systems of the world's nations are interconnected, dependent upon each other, and affect all people.

Tennessee entered the last decade of the 20th century with cautious optimism, but excited about a rare opportunity to make a significant difference in education. Our national and state leaders have championed changes in education with reborn optimism and renewed faith in the value of educating the populace, but with the keen realization that the entire education system, preschool through graduate school, must be restructured.

In late 1989, President George Bush held the first national education summit. He and the nation's governors agreed the education system needs fundamental changes and, working together, set six national goals for education. The Southern Regional Education Board also released a set of education goals for the Southeast.

The 96th Tennessee General Assembly passed legislation in 1989 establishing TENNESSEE CHALLENGE 2000 for the purpose of setting goals for Tennessee public schools and higher education institutions. In response to the legislation, the Commissioner of Education, the State Board of Education, and the Tennessee Higher Education Commission have developed quantifiable statewide education goals and long-range plans.

During 1990, representatives from education, government, and business spoke with citizens across the state in an effort to find an answer to the increasingly important question, "What should students know and be able to do at each level of education?" From firsthand observation and from evaluating information gathered, the conclusion is that fundamental changes will be necessary in the structure and the resources of the learning environment, preschool through graduate school, to ensure Tennessee's future in a national and international economy.

As a result of the goals established at the state, regional, and national levels, measurable objectives for restructuring education at all levels have been established and strategies have been put in place to ensure improvement. Performance will be monitored in such critically important areas as student readiness and achievement, teacher education preparation and induction, high school graduation and college degree completion rates, minority recruitment and retention, school-college cooperation, and education-business collaborations.

Significant progress was made in Tennessee's education system during the 1980s. Tennessee students consistently score at or above the national average on most indicators of student achievement. State education and government leaders must ask, "Should Tennesseans be satisfied with being average."

Continued progress during the 1990s can only be ensured by working together to find answers to the hard questions. Policy makers and educators must continue to look for innovative and improved measurements of performance; carefully document results; provide incentives; and share information and resources among the various levels of the education system.

The next decade presents new challenges for Tennessee public education. Governor Ned McWherter pledged during the 1990 gubernatorial campaign that his next administration is "for the kids." The state's business, government, and education leaders agree that worldwide political, economic, and cultural changes require an educated public in order to relate international affairs to what's going on in Tennessee.

By planning and working together, the Board and the Commission are confident that the goals will be achieved by the year 2000. The plans and strategies presented in this report, and in the Master Plans for public schools and higher education institutions, point the way. The only remaining question is whether we have the will to commit the resources to implement the plans and, thus, achieve the goals.

Tennessee has approximately 1.1 million students in public schools, pre-school through graduate school. Over 125,000 Tennesseans work in some capacity in Tennessee's public education system. According to 1990 U. S. Census Bureau data, Tennessee's population is 4,896,641. **This means that one out of four Tennesseans works for or attends a public school, college, or university.**

Of Tennessee's total population, approximately 1.2 million adults (25 years and older) have less than a high school diploma; over five hundred thousand adults have less than an eighth grade education, with two hundred thousand having less than a fourth grade education. Approximately 1.3 million Tennesseans have some college education; 12.6 percent of the total population in Tennessee has completed requirements for at least a baccalaureate degree compared to 16.2 percent nationally. In Tennessee, approximately 51 percent of graduating high school seniors enter college compared to an average of 59 percent nationally.

In today's workplace, 22 percent of all occupations require a college education; by the year 2000, more than 30 percent will require a college degree, and 65 percent will require some education beyond high school.

Adults with less than a high school education are finding that jobs available to them rarely pay enough to support a family. National studies confirm that **the higher the level of education, the higher the earnings over a lifetime**. On the average, the annual earnings of a college graduate are nearly double that of a high school graduate. The income gap continues to expand to nearly 200% by age 65.

National studies reveal that students whose family incomes are below $20,017 have a college participation rate of 45 percent compared to a rate of 78 percent for their counterparts from families in the above $58,125 income brackets. The same participation rate is true for students in high school--**the lower the family income, the more likely the student is to drop out before completing graduation requirements**. The high school drop out rate in Tennessee has persistently remained at one out of four students.

The unemployment rate of youth in the United States is almost triple the overall unemployment rate. Reports from a recent national study show that 57 percent of teenagers who had dropped out of high school in 1987-88 were unemployed. The rate for Black high school students who dropped out was even higher at 77 percent. Tennessee teenagers (16 to 19 years old) had an average unemployment rate of 14.8 percent in 1988. **Among nonwhite teenagers, the estimated unemployment rate was 31.8 percent compared to 11.7 percent for white teenagers in Tennessee.**

The number of those who do not graduate from high school but take the **General Educational Development (GED) test** has fallen dramatically over the past decade. In Tennessee, the number of GED credentials issued fell from 12,551 in 1988 to 9,083 in 1989. This decrease probably is related to the recently revised GED test which is more difficult and comprehensive than before. Over half of the adults who take the GED test do so because they are interested in advanced training in a postsecondary institution.

In Tennessee, following a national trend, the enrollment of **older students in higher education increased** by 7,775 students in the fall of 1990. The two-year institutions had the largest increase with an 11 percent increase over the fall of 1989. Across the nation, the number of students age 25 and older enrolled in higher education is steadily increasing. Between 1974 and 1988, enrollment of the adult learner rose by nearly 2 million students.

The majority of the **older students enroll as part-time students** and represent the fastest growing population in higher education. Nearly half of all the students enrolled at all levels nationwide attend college part time. In Tennessee, again following the national trend, part-time students represent 41.7 percent of total enrollment.

About half of the students who entered public colleges and universities this fall required one or more **remedial or developmental** courses. Also, about half of those enrolling in vocational technical schools participated in basic skills courses in order to begin successfully the postsecondary programs. A large proportion of the students enrolled in these courses are from the older adult, part-time student population who have been out of the learning environment for some time.

While the general population in Tennessee is undereducated and the participation rate in education is not what it ought to be, substantial progress has been made in student achievement. Several indicators of student achievement show significant gains during the past ten years.

Subject	Increase
Algebra	41%
Geometry and Advanced Mathematics	116%
Science	44%
Social Studies	65%
Foreign Languages	138%
Visual and Performing Arts	23%

During the 1980s, the percentage of Tennessee high school students receiving **honors diplomas** (3.0 GPA and a rigorous course of study) increased from 1.4% to 11%. By 1989, the number of high school graduates admitted to public universities who met the new admission requirements was 88.6%. Enrollments in **college preparatory courses** have increased dramatically in some areas since 1982, as shown at the left.

In the most recent indicator of K-12 student achievement, Tennessee students scored at or above the national average on the norm referenced section of the new state testing program, the **Tennessee Comprehensive Assessment Program (TCAP)**, during 1989-90.

Grade Level	Reading	Language	Math	Science	Social Studies
2	56	56	65	58	57
3	57	55	58	58	57
4	56	56	60	58	56
5	55	56	57	51	56
6	52	51	58	56	56
7	56	54	55	55	54
8	56	56	55	53	56
10	55	55	56	52	56

The College Board's **Advanced Placement (AP) Program**, a cooperative educational endeavor, is based on the premise that college-level material can be taught successfully to well-prepared secondary school students. The number of schools and students participating in this program has increased steadily. In May 1990, 179 Tennessee high schools offered 7,542 AP examinations to 5,196 students. (A student may take an exam in more than one area of study.) Students who score three or higher on the five-point grading scale may earn college credit or advanced placement in a wide array of subjects at participating colleges. In Tennessee, 64 percent of all AP grades were 3 or higher.

The average enhanced **ACT composite test scores** of Tennessee high school graduates, reference year 1989-90, have improved as the students have chosen to enroll in the more rigorous courses, particularly for those students who take the ACT core courses. The 1990 high school class is the first group to take the new Enhanced Version of the ACT introduced in October 1989.

Students with core or more				Students with less than core			
	Test Scores				Test Scores		
Number	English	Math	Comp.	Number	English	Math	Comp.
10,848	22.3	20.7	21.8	18,197	19.4	18.0	19.1

The average ACT score (Enhanced Version) for 11,464 students entering four-year public universities as first-time freshmen for fall 1990-91 was 21.28.

Graduates of Tennessee's public higher education professional schools are currently performing at or above the national levels on most of the **professional licensure examinations**. In 1990, statewide scores in Law, Engineering, and Dental Hygiene reached their highest point in the past three years.

Tennessee's college students are learning more. The **ACT COMP** scores of graduates of public universities went from 1.3 points below the national average in 1982-83 to .1 point above the national average in 1988-90.

The **job placement rate** of graduates from the community colleges and technical institutes in program-related positions improved from 66 percent to 87 percent, a 21 percent gain from 1984 through 1989. The placement rate in program-related jobs at the area vocational technical schools also improved over that period, from 65 percent to 83 percent.

Although the results are mixed, the combined effort of education and government leaders to improve the effectiveness of education for Tennessee's citizens has provided a strong base on which to build an even better system for the future, a system which is among the best in the country.

CHANGES NECESSARY DURING THE 1990s

The most obvious need for change in Tennessee education is found in the **learning environment**. Not much has changed in the typical school or college classroom setting since the middle of the century; however, the home, the community, and the workplace have changed dramatically.

Tennessee has moved from needing workers with a **limited education** who could fill positions in assembly-line factories or who could work on family farms to needing workers who have the knowledge, skills, and training necessary to fill positions in high technology and information-driven business and industry. Most of these jobs were unheard of just twenty short years ago.

Since the classrooms and the overall learning environment have not kept up to date with the changes in society, students entering the **computerized workforce** of today have limited exposure to the new technologies and to the knowledge required for even basic, entry-level jobs. Too many students are products of an education system woefully outdated or insufficient and leave school with inadequate skills, or poor work habits, thus compounding the problem.

As the public becomes more aware of the need to have more education to join the workforce, educational leaders will find it necessary to strengthen even further the **cooperative efforts** between preschool through graduate school; build stronger school-to-work transition programs to prepare non-college-bound students for the blue-collar workforce; provide these students postsecondary training through certification programs; establish better transfer relationships at all levels of education; and encourage the development of academic partnerships with the private segment of education.

Probably one of the most challenging areas where need for change has been documented is in serving a **large diversity of students**--the disadvantaged, the gifted, the talented, the homeless, the underprepared, the underchallenged, the learning disabled, the drug impaired student, the older student, the part-time student--while continuing to serve the traditional student.

In higher education, to meet the needs of the **changing student population**, adult education programs will be restructured to make them more accessible and relevant to older, busier, and more sophisticated students. While students under 25 years of age still are the largest group enrolled in postsecondary education, students in the 31 to 45 year age group have grown at the fastest rate in Tennessee. The two-year schools have seen the largest increase in that age group, a 24.61 percent increase as compared with a 17.78 percent increase at the universities.

The **critical fields of study**, such as allied health, engineering, and the sciences, will be made available to more students. Changes in admission procedures and requirements will be explored and more flexible class schedules will be developed. Also more courses will be made available at off-campus sites, or through the expanded use of instructional technologies in order to accommodate the older, part-time student.

The **study of languages** other than English has become a critical link in our efforts to better understand and participate in the global community of which Tennessee has become a part. Two units of a single foreign language became a requirement for regular undergraduate admission to Tennessee's public universities in the Fall of 1989. Only a small percent of students did not meet this requirement. Most who failed to meet this requirement were from school districts that do not offer a foreign language. Arrangements were made for the deficiency to be completed while beginning their college work.

While there is just cause for cautious optimism in reaching the proposed education goals, there must be a serious reassessment of the rising **costs associated with education**. Predictions of economic downturns and fiscal austerity naturally create real concerns about how to lead the way for major changes in education, both in terms of policies and how changes will be funded.

Meeting the increased costs of postsecondary education is a continuing challenge for college-bound students and their families. Over 80 percent of 1990 high school graduates nationwide **planned** to apply for financial aid; two-thirds expected to work part time while in college. A tremendous **need exists** to improve **financial aid** programs or provide special discounts so that all Tennesseans might have access to postsecondary education.

The financial aid systems, designed originally for 18-22 year old students, are not well suited for older adults just entering or returning to postsecondary education as either full-time or part-time students. A financial aid program, which includes a **public service** component, has been proposed for Tennessee. Not only will this program provide an opportunity for more students to attend college, but will also instill values of public service and civic responsibility which will enhance the quality of life for all citizens.

One of the main objectives of the **Tennessee Academic Scholars Program** is to increase the likelihood that the highest achieving high school graduates who attend college in Tennessee will remain in Tennessee following graduation. On June 15, 1990, a questionnaire was sent to each of the ten students who had received the first scholarships in 1986. All but one had received the bachelor's degree in the spring of 1990; that one had a double major and plans to complete his undergraduate studies in the spring of 1991. Eight of the ten indicated they plan to continue residing in Tennessee. The two who indicated they would no longer reside in Tennessee are currently in graduate school out of state.

The **elimination of bureaucracy and duplication** of efforts in the delivery of services is a priority in both K-12 and higher education. Not only does "red tape" stifle the teachers and administrators in our public schools, colleges, and universities, it is also a needless drain on valuable resources. Duplication of programs at postsecondary institutions and at the high school level is not usually in the best interest of the state. Master plans of both K-12 and higher education include strategies to improve the delivery of education and services to the citizens of Tennessee as effectively and efficiently as possible.

Higher education institutions in particular have been cautioned about "trying to be all things to all people." The public institutions of higher education have looked at what they are doing to determine if the programs offered meet the needs of an international economy, the nation, the state, the local communities, and business and industry. **Long-range plans and mission statements** have been developed and will be constantly refined to ensure that the differences and the strengths of each institution are cherished rather than have each institution simply be a facsimile of another institution.

Local public school systems in Tennessee have also been required to develop **five-year strategic plans** which must include mission statements, goals, objectives, and strategies. All local systems completed their plans to begin with the 1990-91 school year.

Assessments of the performance of schools, institutions, teachers, and students have been and will continue to be a major part of the improvements planned in Tennessee's education system. **Accountability and credibility**, in all areas and at all levels of education, are a major concern to the general public and elected officials. The goals and plans of the Board and the Commission are structured such that results will be reported annually and each school, college, and university will compete only with itself for success.

GOALS AND PLANS FOR THE FUTURE

The 21st Century Challenge, developed by the **Commissioner of Education**, reflects an ambitious and insightful agenda for Tennessee and places education front and center as the state's priority. The document is a collective view of what citizens from all walks of life have conveyed to state officials in various forums during the past two and a half years. The attainment of the goals will require strong grassroots support and vigorous and courageous action by political and education leaders. The end result will be a different kind of school for the students.

The **State Board of Education** incorporated the goals and objectives recommended by the Commissioner of Education and many of the suggestions of Dr. Donald Thomas, special consultant to the Governor, into the Master Plan for Tennessee Schools: Preparing for the 21st Century. The Master Plan lists goals to be accomplished, includes strategies for achieving the goals, and sets forth how progress in meeting the goals will be measured. The mission of the State Board of Education, "To ensure that Tennessee schools are among the best in the nation," will be achieved through meeting and exceeding the goals.

The **Tennessee Higher Education Commission**, in consort with the Tennessee Board of Regents and The University of Tennessee Board of Trustees, developed six major goals and measurable benchmarks for postsecondary education to be attained by the year 2000. The document, Tennessee Challenge 2000, provides the foundation on which to build a stronger higher education system to meet the needs of all Tennesseans.

The higher education master plan, Higher Education Serving Tennessee, represents a blueprint for Tennessee higher education in six specific areas: serving Tennessee's student population; serving the schools; helping Tennessee realize its economic potential; continuing and expanding special quality initiatives; improving institutional efficiency, accountability, and institutional effectiveness; and using technology to serve Tennessee.

These documents address the need not just to change but to revitalize Tennessee's educational system so that students, on completion of programs, are prepared to participate as employees in a technologically-oriented workplace; to teach in the state's elementary, secondary, and postsecondary institutions; to become local, state, and national leaders in business, industry, and government; or to pursue whatever endeavors they might chose with a better chance for success.

One of the major keys to the success of the long-range plans for Tennessee education will be joint support of the plans and cooperation at all levels of education. Public schools have assumed responsibility to coordinate comprehensive community services for at-risk young children and their families. Higher education institutions have assumed responsibility to serve and work with public schools as partners in improving all of education.

Teacher education is one of the most critical areas of relationship between public schools and higher education institutions and one which is mutually dependent. Success at one level depends on good performance and success at the other level. Both the State Board of Education and the Tennessee Higher Education Commission have established goals to increase the quantity and quality of teachers for the public schools.

The Board has established specific policies and strategies to increase the number of students who choose to become **teachers** and to retain those who are already in the profession. The Commission has set a goal to increase the number of teacher education candidates by 30 percent, and of those, 22 percent will be black teachers. Both the public school and higher education long-range plans contain strategies to implement teacher internships or induction programs for teacher candidates and beginning teachers.

Long-range plans call for the development of contractual relationships between the teacher education institutions and the public schools which will provide experienced teachers the opportunity for further training in fields of study specifically related to improvements in teaching. Similar relationships to assist in the recruitment, selection, and development of school leaders will occur.

Special programs geared to potential "first generation" college students are designed to promote interaction among public school and higher education students and faculty. **Upward Bound**, a federally-funded program, provides an opportunity for selected students in grades 9-12 to study on a college campus and for student tutors from the campus to go to the high school to work with students enrolled in the special program.

The **Tennessee Collaborative for Educational Excellence**, a nationally recognized statewide collaboration project associated with the College Board has already affected hundreds of high school teachers and higher education faculty. The Collaborative provides a network of high school, college, and university faculty working together to address improvement in curricular articulation, teaching methods, and student participation.

The **Governor's Schools** and other summer institute programs serve outstanding high school teachers and students. All of the programs are offered on college and university campuses and provide opportunities for interaction among higher education and secondary school faculty not otherwise available.

Quality programs have been established at the higher education institutions such as the Centers of Excellence, Centers of Emphasis, and Chairs of Excellence; Tennessee Academic Scholars; Minority Teacher Education Grants; Performance Funding; the Foreign Language Institute; and the systematic review and replacement of instructional and research equipment as well as a review and maintenance program for campus physical facilities.

Tennessee education policy leaders have established a pattern of being innovative in changing the routine "way of doing business." At times, these changes have been considered quite daring by the rest of the country. Tennessee is one of the few states with experience in setting measurable education goals and was the first state to provide funding to higher education institutions based on performance.

EXPECTED RESULTS

Implementation of the innovations and challenges presented in The 21st Century Challenge Plan, the Master Plan for Tennessee Schools: Preparing for the Twenty-First Century, and in the Tennessee Challenge 2000 is critical to the future of all Tennesseans. Subsequent editions of the joint report will provide an annual assessment of progress toward the objectives of the two documents which include the following expected results:

- A 25% increase in those who receive GED credentials each year.
- A 15% increase in the number of high school graduates who go on to postsecondary education each year.
- A 10% increase in the graduation rate each year of full-time degree-seeking college students.
- An improved participation rate in postsecondary education rate from all geographic areas of the state equal to the current state mean participation rate.
- An increase in the participation rate of Black citizens in Tennessee higher education.
- An increase in the number of high school students completing Algebra I and II.
- An increase in the high school graduation rate to 85% of those students who enter the ninth grade.
- A decrease in the number of recent high school graduates who need remedial course work in postsecondary education programs.
- An increase in the enrollment in graduate and professional programs in accordance with state and national needs.
- A statewide technology network in place to serve the teaching, learning, and management needs of schools, institutions, and state agencies.
- An increase in state-of-the-art technology located in every public school classroom and supported by a comprehensive professional development system for teachers and school leaders.
- A decrease in the grade-level retention rates of elementary and secondary students.
- An increase to 100% of the four-year old at-risk children and their families enrolled in comprehensive early childhood education and parent involvement programs.
- An increase in the achievement levels of students at each grade level, grades 2-8 and 10, on the Tennessee Comprehensive Assessment Program (TCAP) test.
- An increase in the percentage of high school graduates going on to postsecondary education who have completed the ACT core curriculum.

- An increase in the average ACT score of 12th grade students.
- An increase in the number of high school students each year who complete advanced placement courses and score 3 or above in the advanced placement examinations.
- An increase in the number of individuals each year who become licensed teachers in Tennessee.
- An increase in the test performance and evaluation results of teacher candidates and beginning teachers.
- An increase in the percentage of minorities entering the teaching profession.
- An increase in the number of adults served in adult literacy programs and who progress from one level to another.
- An increase in the number of school/business and private sector/university or college partnerships
- An increase in school-based decision making in public schools.
- Adequate and sustained funding levels for pre K-12 and higher education.
- An increase in university research, including applied research which contributes to economic growth.
- An increase in private gifts and grants to colleges and universities.

LEADERSHIP CHALLENGES

Governor Ned McWherter has said, "Results are what count." And the results from the education improvement plans developed by the Board and the Commission will be an education system which produces more and better educated graduates at all levels, provides learning opportunities in the most efficient manner possible, and performs with the lowest possible cost to the taxpayer.

Grassroots support for change in the structure of and expectation for education has been garnered by the Governor, members of his Cabinet, and education leaders holding community meetings across the state to receive input and to explain proposed changes. The public has asked hard questions about results of other state reform efforts; about the quality of teacher education programs; about outdated curricula and equipment; about student performance, particularly in mathematics and science; and about student readiness for kindergarten as well as for college-level work and entry into the workforce.

The information contained in this annual report clearly indicates the need for change. It is equally clear that all of the education community must participate in shaping the implementation of the planned changes. While Tennesseans have worked hand in hand during previous education reforms, increased collective effort and careful documentation of results are necessary to ensure support and success during a time of federal and state budget constraints.

We must strive for greater unity of purpose, exert stronger leadership and influence, and articulate better the needs of students in primary and secondary schools and those in colleges and universities, and not be timid in doing so. The viability and integrity of all segments of education and the economy are at stake.

The recommendations contained in this report, and in the master plans of the Board and the Commission, will cost a substantial amount of money. The Board and the Commission are committed to quality public education for all and to developing strategies to pay the extra cost.

As leadership is provided to reach these goals, all of Tennessee's society will be affected. The goals of education are relevant to individuals as well as to the state, to the welfare of older citizens as well as to the young, and to the industrial and business community as well as to the education community. The issues affecting education, society, and the economy are inseparable.

SUMMARY OF COMPLIANCE

The annual joint report Challenges for Tennessee Public Education: Working Together Toward the Twenty-First Century complies with the requirements established in the Public Education Governance Reform Act of 1984 (TCA 49-1-302).

A. The respective master plans of the State Board of Education and the Tennessee Higher Education Commission are results oriented. The measurement of learning at each level of education precludes unnecessary duplication.

B. The high school graduation requirements and the requirements for admission to public colleges and universities do not conflict. There are some requirements for graduation from high school which are not requirements for admission to higher education, e.g., physical and health education. Also, there are some requirements for higher education admission that are not required for high school graduation, e.g. two units of a foreign language and one unit of visual/performing arts.

C. This report contains achievements of both elementary-secondary and higher education with respect to the master plans, and the two master plans are closely related.

D. This report contains information about the state's needs for education, progress that has been made, and goals for achievement over the next decade.

APPENDIX A
REQUIREMENTS FOR THE ANNUAL JOINT REPORT

The Public Education Governance Reform Act (PEGRA) of 1984 (TCA 49-1-302) directs the State Board of Education and the Tennessee Higher Education Commission to provide jointly a report to the Governor and the General Assembly, all public schools and institutions of higher learning and their respective boards. The report is to be submitted not later than February first of each year and is to include, but not be limited to:

A. The extent of duplication in elementary-secondary and postsecondary education,

B. The extent of compatibility in high school graduation requirements and admission requirements of postsecondary institutions,

C. The extent to which respective master plans of the State Board of Education and the Tennessee Higher Education Commission are being fulfilled, and

D. The extent to which state needs in public education are being met as determined by such Board and Commission.

APPENDIX B
TENNESSEE HIGH SCHOOL GRADUATION REQUIREMENTS

Courses	Units
English Language Arts	4
Mathematics	2
Science	2
American History	1
[1]Economics	½
Physical Education	1
Health Education	½
Total Required Courses	11
Elective Courses	9
Total for Graduation	20

[1] Students may meet this requirement by:

1. One Semester in Economics
2. Out-of-school experiences through Junior Achievement
3. Marketing Education

APPENDIX C
MINIMUM HIGH SCHOOL COURSE REQUIREMENTS FOR REGULAR UNDERGRADUATE ADMISSION

Tennessee Board of Regents Institutions
The University of Tennessee Institutions

SUBJECT AREA AND UNITS	HIGH SCHOOL COURSES FULFILLING REQUIREMENTS	
English 4 units required	English I, II, III, IV	
Algebra I and II 2 units required	Algebra I, Algebra II	
Advanced Mathematics 1 unit of geometry or an advance course with geometry as a significant component required	Unified Geometry Trigonometry Advanced Math Survey Calculus	Analytical Geometry Probability & Statistics Advanced Algebra
Natural/Physical Sciences 2 units required; 1 must be a laboratory course in biology, chemistry, or physics	Biology I, II Chemistry I, II Physics Anatomy & Physiology Geology	Principles of Technology I General Science Physical Science General Science 1 A
U. S. History 1 unit required	U. S. History	
Social Studies 1 unit required	World History Ancient History Modern History	World Geography European History
Foreign Language 2 units in same language	Latin French Spanish German	American Sign Language I Japanese Russian
Visual/Performing Arts 1 unit required (deferred to Fall 1993)	Theater Arts Visual Arts Music Theory Music History	Vocal Music Instrumental Music Art History General Music

APPENDIX D
NATIONAL EDUCATION GOALS

President Bush and the National Governors' Association

- GOAL 1. By the year 2000, all children in America will start school ready to learn.

- GOAL 2. By the year 2000, the high school graduation rate will increase to at least 90%.

- GOAL 3. By the year 2000, American students will leave grades 4, 8, and 12 having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so that they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.

- GOAL 4. By the year 2000, U. S. students will be first in the world in mathematics and science achievement.

- GOAL 5. By the year 2000, every adult American will be literate and will possess the skills necessary to compete in a global economy and to exercise the rights and responsibilities of citizenship.

- GOAL 6. By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

APPENDIX E
GOALS FOR EDUCATION: CHALLENGE 2000

Southern Regional Education Board

By the year 2000:

- All children will be ready for the first grade.
- Student achievement for elementary and secondary students will be at national levels or higher.
- The school dropout rate will be reduced by one-half.
- Ninety (90) percent of adults will have a high school diploma or equivalency.
- 4 of every 5 students entering college will be ready to begin college-level work.
- Significant gains will be achieved in the mathematics, sciences, and communications competencies of vocational education students.
- The percentage of adults who have attended college or earned two-year, four-year, and graduate degrees will be at the national averages or higher.
- The quality and effectiveness of all colleges and universities will be regularly assessed, with particular emphasis on the performance of undergraduate students.
- All institutions that prepare teachers will have effective teacher education programs that place primary emphasis on the knowledge and performance of graduates.
- All states and localities will have schools with improved performance and productivity demonstrated by results.
- Salaries for teachers and faculty will be competitive in the marketplace, will reach important benchmarks, and will be linked to performance measures and standards.
- States will maintain or increase the proportion of state tax dollars for schools and colleges while emphasizing funding aimed at raising quality and productivity.

APPENDIX F
MASTER PLAN FOR TENNESSEE SCHOOLS: PREPARING FOR THE 21ST CENTURY

State Board of Education

Mission: To Have Tennessee Schools Among the Best in the Nation

Goals:

I. The 21st Century Classroom

A. Sound Instructional Program; Full Tool Box of Resources

- All children will complete the third grade having developed the capabilities to read, write, and solve mathematical problems effectively.
- All children will complete the eighth grade having demonstrated competency in challenging subject matter and having developed the ability to learn independently and use their minds well.
- Children with identified disabilities will progress in accord with their Individualized Educational Programs (IEPS).
- All students admitted to public colleges and universities will be prepared to begin college-level work.
- All students graduating with an emphasis in vocational education will be prepared to compete effectively in the job market and/or to succeed in postsecondary technical education.
- The average achievement level of Tennessee students will exceed the national average and will be in the top one-third of the states in the Southeast.
- The Tennessee school curriculum will include challenging subject matter so that all students learn to use their minds well and are prepared for responsible citizenship, further learning, and productive employment.
- Teaching will be a profession of choice for a significant portion of the best and brightest graduates of the state's colleges and universities.

B. Education of All Students; Additional Resources for Those At-Risk

- All children will begin school ready to learn
- At least 85 percent of all students will complete high school.
- At least 90 percent of the adult population will be literate.

C. Technology

- State-of-the-art technology will be used to improve instruction and learning in all schools, to provide professional development, to manage schools and school systems, and to link all schools in a statewide information network.

II. School Governance

A. Accountability

- State and local education policies will be focused on results rather than process.
- Tennessee will have a management information system that provides information on students, schools, and school systems to improve learning and assist policy making.

B. Leadership

- All leaders of schools and school systems will be prepared to demonstrate improve performance of schools and school systems.

C. School-Based Decision Making

- School-based decision making will be the rule rather than the exception in schools.

III. Adequate and Sustained Funding

- A comprehensive approach to funding schools will provide adequate and equitable distribution of resources on a continuing basis, will provide adequate funding for new initiatives, and will be tied to goals and accountability standards.

APPENDIX G
21ST CENTURY CHALLENGE:
STATE GOALS AND OBJECTIVES FOR EDUCATIONAL EXCELLENCE

Commissioner Charles Smith
State Department of Education

By no later than the first day of the 21st century:

- All entering first grade students--rich and poor black and white, urban and rural, gifted and disabled--shall be prepared to achieve at the first grade level.
- Every child who completes the third grade shall be prepared to read and write and solve mathematical problems effectively at the fourth grade level.
- Achievement levels of Tennessee students shall exceed the national average and be in the top one-third of the states in the Southeast.
- The statewide high school completion rate shall be at least 80 percent.
- Teaching shall be a profession of choice for a significant portion of the best and brightest graduates of the states' colleges and universities.
- No less than 90 percent of the Tennessee adult population shall be literate.
- All students graduating with an emphasis in vocational education shall possess the competencies required to compete effectively in the job market within their geographical area of choice and/or to succeed in postsecondary technical education.
- All local school districts shall be prepared to demonstrate conclusively improved performance and productivity.
- All students admitted to state universities shall be prepared to begin college-level work.
- A comprehensive approach to funding schools shall be in place and such an approach shall be linked directly to goals and tied to accountability standards for quality and productivity.
- School-based decision making shall be the rule rather than the exception in all school districts of the state.
- The Tennessee school curriculum shall be on the cutting edge of knowledge and fully responsive to the vocational, academic, and special education needs of all students as well as the employment needs of this state's businesses and industries.

APPENDIX H
TENNESSEE CHALLENGE 2000

Tennessee Higher Education Commission

A. **By the year 2000, Tennessee will be among the leading Southern states in providing college education to its citizens.**

1. By the year 2000, the combined headcount undergraduate enrollment of public higher education institutions in Tennessee will be over 206,000 students.

2. By the year 2000, 50% of recent high school graduates will enroll in public higher education institutions in Tennessee.

3. By the year 2000, graduate and professional school enrollment in public universities will be adequate to meet the human resource needs of business, industry, government, education, and research in Tennessee.

4. By the year 2000, headcount enrollment in area vocational/technical schools will reach 24,000 students per year.

5. By the year 2000, enrollment of students over the age of 25 in public universities and colleges in Tennessee will increase to 50%.

6. By the year 2000, public universities in Tennessee will graduate at least 51% of students within six years of enrollment.

7. By the year 2000, two-year institutions in Tennessee will graduate at least 25% of students within six years of enrollment.

8. By the year 2000, 75% of students completing university parallel degree programs at public community colleges in Tennessee will enroll in baccalaureate degree programs at state universities.

9. By the year 2000, the racial composition of enrollments in public higher education institutions will be sufficient to ensure that all Tennesseans, regardless of race, will have access to higher education.

10. By the year 2000, rates of persistence to graduation will be the same for Blacks as for other racial groups.

B. **By the year 2000, Tennessee will be a national leader in improving the quality of instructional programs and demonstrating this improvement through statewide and institutional assessment.**

1. By the year 2000, the average ACT COMP scores of graduates of Tennessee's public universities will average 188.5.

2. By the year 2000, passing rates on professional licensure examinations of graduates of Tennessee's public higher education professional schools will remain above national levels.

3. By the year 2000, 75% of students completing university parallel degree programs at public community colleges in Tennessee will enroll in baccalaureate degree programs at state universities.

4. By the year 2000, rates of transfer from public community colleges to state universities in Tennessee will be the same for blacks as for other racial groups.

5. By the year 2000, a Superior Teaching Program will be fully funded and implemented across the state.

6. By the year 2000, cumulative collections of materials in libraries at Tennessee public institutions will be current and these libraries will be able to provide ready access to materials necessary to support their instructional and research needs.

C. **By the year 2000, Tennessee's colleges and universities will be among the nation's leading institutions in preparing graduates with the knowledge and skills essential for effective teaching.**

1. By the year 2000, 1,800 individuals will complete teacher education programs in Tennessee public universities each year. Of that number 396 (22%) will be black.

2. By the year 2000, 95% of teacher education programs in Tennessee's public universities will pass the NTE or an equivalent examination on the first attempt.

D. **By the year 2000, Tennessee will have improved both the quality and quantity of research and public service so that the state is recognized for its superior research and service activities.**

1. Expenditures on research from restricted accounts at universities will reach $230 million by the year 2000.

2. Expenditures on public service from restricted accounts at universities will reach $43 million by the year 2000.

E. **By the year 2000, Tennessee's higher education institutions will be able to compete for the very best faculty and staff.**

1. By the year 2000, faculty salaries at Tennessee public higher education institutions will be above those of their peers in other states.

F. **By the year 2000, Tennessee's higher education institutions will have garnered sufficient resources to achieve the high quality and access envisioned in the goals of *Tennessee Challenge 2000*.**

1. By the year 2000, Tennessee's public higher education institutions will merit a proportion of state dollars above that currently received.

2. By the year 2000, annual private contributions to Tennessee public higher education will be $140,000,000.

APPENDIX I
HIGHER EDUCATION SERVING TENNESSEE

Executive Summary
Tennessee Higher Education Commission

Through strategic planning, Tennessee higher education is combining educational policy and planning with financial administration. This plan represents a blue print for Tennessee higher education as, together, we prepare for the year 2000.

As we enter the next century, out state's population will be only slightly larger but will be older. Most of the jobs available to our citizenry will require not only the best elementary and secondary education but also postsecondary training.

Recognizing the urgency that Tennessee can and should be a leader in educational and economic achievement, representatives of the two higher education governing boards and the state coordinating board met during the past year to project goals and objectives for Tennessee higher education.

Within this strategic plan, higher education proposes to serve Tennessee's student population; serve the schools of Tennessee; help Tennessee realize its economic potential; continue and expand quality initiatives; improve institutional efficiency; and use technology to serve Tennessee.

SERVING STUDENTS

In spite of abrupt increases in higher education enrollments during recent years, the educational needs of the state are far from being met. In terms of the percentage of persons age 25 or older who have completed 4 or more years of college, Tennessee with 12.6% is significantly below the national average of 16.2% and the SREB average of 14.5%.

Tennessee must become a leader in attracting jobs and serving its work force needs. It is predicted that the nation, and especially the South, will experience severe work force deficiencies during the next decade and into the next century. Tennessee can resist that trend by raising the educational and job skill levels of its work force and by ensuring that such improvement responds to the needs of both urban and rural areas.

The resources of higher education within the state--private and public colleges and universities must be brought to bear on this issue. The Fall 1990 public higher education enrollment in Tennessee was approximately 180,000 students. An increase of 70,000 students by the year 2000, thus raising enrollment to 250,000, would move the state to a competitive level in the south and nation with respect to the needs of an educated work force.

SERVING SCHOOLS

In Tennessee we must view the relationship between K-12 and higher education as a mutually dependent continuum. Success at any one level of education depends on good performance at all levels. Higher Education has a responsibility to serve and support K-12 as its partner in improving all of education.

HELPING TENNESSEE ECONOMICALLY

Tennessee's competitiveness can be improved and sustained only if it builds and maintains high quality educational programs and provides access to them for students from kindergarten through advanced graduate programs. Further, the sustained attractiveness and well being of the state will require that higher education contributes to high quality health care, implementation of new technologies, and continued cultural and social growth of the state.

IMPROVING QUALITY

To improve quality of universities and colleges, the plan recommends new Chairs of Excellence and professorships for outstanding teachers and improvements to faculty salaries.

IMPROVING EFFICIENCY

It is obvious that in order to meet the needs of the citizens of Tennessee, higher education institutions must operate in as effective and efficient a manner as possible. Great care must be taken to ensure that the maximum effect is achieved from any appropriation of new funding into the higher education system. Administrative cost savings should be reinvested into making the instructional programs more effective.

The coordinating and governing boards should ensure that strategic planning, outcomes assessment, program review, and executive accountability are effective and properly supported. Higher education should expand its emphasis on assessment of student learning and on evaluation of institutions fulfilling their missions as part of the strategic planning process. Personnel should be well compensated, appropriately supported, and all programs thoroughly evaluated.

USING TECHNOLOGY

Higher education should participate as a partner with the state in the planning and development of a state telecommunications system and should continue to upgrade the technological capabilities of all institutions to improve the delivery of services to the state.

The higher education community believes that the implementation of recommendations contained in the report, "Higher Education Serving Tennessee," will assure that the quality of higher education will improve markedly, that Tennessee will be a leader among the other states, and that the citizens of Tennessee will be well served by their colleges and universities.

APPENDIX J
EDUCATIONAL GOALS AND PLANNING DOCUMENTS FOR TENNESSEE

The studies to determine the need for change in Tennessee's public education have resulted in the following documents:

Master Plan for Tennessee Schools: Preparing for the Twenty-First Century

State Board of Education

Goals and Objectives of the 21st Century Challenge Plan

Recommendation to the General Assembly and the State Board of Education
Commissioner Charles Smith, State Department of Education

Tennessee Education for the 21st Century

Report to Governor Ned McWherter, State of Tennessee
Dr. M. Donald Thomas, Consultant

The Future of Tennessee: Higher Education 1987-1993

A Master Plan for Higher Education in Tennessee
Tennessee Higher Education Commission

Higher Education Serving Tennessee

A Long-Range Plan for Higher Education in Tennessee
Tennessee Higher Education Commission

Tennessee Challenge 2000

Recommendation to the General Assembly of Specific Benchmarks for Higher Education
Tennessee Higher Education Commission

Vision 2000: Enhancing Economic Development in Tennessee Through Improved Sub-Baccalaureate Education and Training

Tennessee Board of Regents

A Five Year Plan for Serving Tennessee

The University of Tennessee Board of Trustees